C.1 BACKGROUND

The Naval Air Warfare Center Aircraft Division (NAWCAD), Special Communications Mission Solutions (SCMS) Division 4.11.4 provides full spectrum Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) technical support to the warfighter in Continental United States (CONUS), outside the Continental United States (OCONUS), and hazardous areas. This support is provided from requirements definition through life cycle sustainment. This is "cradle to grave" support that helps ensure interoperability, supportability, and connectivity among field equipment. SCMS supports Department of Defense (DoD), Executive Branch, and other Federal agency sponsors worldwide. In support of this mission, the SCMS 4.11.4 provides Distance Learning Support (DLS), which is the subject of this procurement. SCMS Division 4.11.4 has provided DLS to its current sponsor, the Marine Corps Distance Learning (MCDL) Program, since 1999. The MCDL support has expanded over time to its current capability to remotely provide the MarineNet Learning Management System (LMS)/ Knowledge Management System (KMS) DLS throughout the world. The current MCDL sponsor requires a unique set of infrastructure that can be found in Hardware/Software List. This sponsor represents a single instance of how the overall requirements of this Task Order (TO) will be executed.

The MCDL infrastructure will either move from Webster Field to a Marine Corps facility in Kansas City, MO or will be moved to a Cloud hosting site. If the cloud hosting environment is used, the move would occur within 18 months. The contractor shall provide migration assistance in either case. Operational and engineering support for this sponsor will continue at current levels with the exception of activities such as facility monitoring. If the current infrastructure does not move to the cloud, the contractor shall assist with a Technical Refresh of all infrastructure components contained in the Government Furnished Equipment (GFE) (**Attachment Z**).

Additionally, the Government is in the process of implementing automated testing framework for all sponsors as well as support other non-NAVAIR organizations. The contractor shall support this framework.

C.2 PURPOSE

The NAWCAD, SCMS Division 4.11.4 requires the contractor to supply a full range of DLS capabilities to include all infrastructure and unique implementation elements as applicable to an SCMS sponsor. SCMS requires that the operational requirements of the current MCDL sponsor be met as well as any enhancements for this sponsor while also developing and maintaining solutions for new sponsors. The contractor shall support multiple client sponsors and enhancement/refresh/maintenance releases simultaneously.

C.3 SCOPE

The scope of this requirement is to provide Naval Air Warfare Center Aircraft Division (NAWCAD), Special Communications Mission Solutions (SCMS) Division 4.11.4 and its sponsors and other Non-NAVAIR organizations with Learning Management Systems (LMS) and Knowledge Management Systems (KMS) support. This support will include activities such as

but not limited to provisioning of infrastructure (hardware and software), infrastructure operational support, content development and training, software development, maintenance and enhancement, and Help Desk (HD) support. Each sponsor's implementation will be unique and may include all or a subset of the Task Area services identified in **Section 5** herein. New sponsor implementations will be added incrementally over time, particularly in the out-years of the TO. A sponsor is a DLS user that is being supported by SCMS (the customer). The Government estimates that there will be five new implementations over the life of the TO (one in the base year and four more over the remaining optional years). Performance Metrics will be determined for each new sponsor and become part of the Award Fee process. The implementation of new sponsors will require contractor ramp-up of resources for discrete periods of time until sustainment is achieved.

C.3.1 OPERATIONAL ENVIRONEMENT

SCMS is currently supporting the MCDL operational environment that resides and will be supported by the contractor at Webster Field in St. Inigoes, Maryland. There is space at this site for 22 contractor personnel.

The contractor shall provide a Contractor-Owned Contractor-Operated (COCO) CONUS software development capability in its own space. This space must be available during transition-in.

In addition, the contractor shall provide COCO space to perform all other off-site work, to include meetings with the Government. This contractor-provided space shall be cleared at the Secret level with no level of safeguarding required. It shall be within 45 ground transportation miles of NAWCAD, Patuxent River, St. Inigoes, MD and shall be established no later than 180 days after Task Order Award (TOA). The Government does not intend to assume responsibility to retain facilities or take control of any title after the TO is completed nor enter into or take control of any lease. All personnel working with cybersecurity/information assurance shall have a Secret clearance.

There is a possibility of support being required in Kansas City, MO, to include assistance with evaluation, planning, and migration to this operational environment.

In addition, the Government is moving to Information Technology Infrastructure Library (ITIL) v3 processing. As new sponsors make use of SCMS services, each may have its own ITIL requirements. Implementations vary from version 1 to version 3 for the MCDL sponsor.

The following are the current customers or sponsors and associated locations:

a. NAWCAD 4.11 – Webster Field, St. Inigoes, MD - customer
b. NAWCAD 4.11.4 – Webster Field, St. Inigoes, MD – customer
c. College of Distance Education and Training (CDET), Training and Education Command (TECOM), United States Marine Corps (USMC) – Quantico, VA - sponsor
d. Program Manager Training Systems (PMTRASYS), Marine Corps Systems Command (MARCORSYSCOM), USMC – Orlando, FL - sponsor

C.5 TASKS

The Government will continually monitor the contractor's performance with the use of Government-provided Performance Metrics (**Attachment B**) which will be part of the Award Fee Determination Plan (AFDP), (**Attachment H**). The AFDP will be updated as SCMS requirements change and as new sponsors are brought on board. The Government intends to quickly support more sponsors with similar operational/project support. The contractor shall support the following Task Areas:

a. Task 1: Project Management
b. Task 2: Transition-In
c. Task 3: Transition-Out
d. Task 4: Operational Support
e. Task 5: Engineering Support
f. Task 6: Additional As-Needed Support

C.5.1 TASK 1 – PROVIDE TASK ORDER/PROJECT MANAGEMENT

The contractor shall provide TO management support. This includes the management and oversight of all activities performed by contractor personnel, including subcontractors, to satisfy the requirements identified in this Performance Work Statement (PWS). The identified Key Project Manager (PM) shall provide management, direction, administration, quality assurance, and leadership of the execution of this TO.

For management of projects within the overall activity of TO Support, the contractor shall provide periodic project support that can consist of a broad range of activities from Engineering Change Request (ECR) releases that would be collections of operational enhancements; to the engineering and development of architectures, networks, and systems for sponsors; to upgrading a sponsor's processes to ITIL version 3; and/or to engineering, implementing, and operationally managing new sponsor Distance Learning systems. Project activities can span the requirements contained in Task Areas 4 and 5 herein. On average these projects are two to six months in duration. The contractor shall provide systems, cybersecurity, facilities, network, and knowledge management engineering as well as research and development of new and emerging technologies in support of these projects.

In advance of each project, the Government and contractor shall meet to discuss each project in terms of understanding, the start date, milestones, unique requirements, expected travel, monitoring, reporting, and performance expectations. Resources expended against each project shall be reported with each Monthly Status Report (MSR).

The contractor shall support several projects at any given time. Performance against Acceptable Quality Levels (AQLs) is continually monitored by the Government. The contractor shall maintain Operational AQL performance regardless of the degree of project-based support. The Government expects to have one new sponsor project in the base year and four more over the remaining life of the TO.

As part of project support the contractor shall provide HD Level 3 ECR support to provide small and large scale enhancements and fixes that are implemented in aggregated releases. The Government expects at least 170 ECRs aggregated to six minor releases per year and one major release every two to three years. A major release might include architectural changes or system redesigns. Minor releases might include functional changes within the existing level of support, or new software to manage a new function within the existing support structure or lifecycle changes such as adding a feature.

The contractor shall provide technical support to identify procurement sources for software, equipment, and cloud services. The contractor shall be capable of interfacing with and updating the Government's hardware and software acquisition management systems to upload/download data on each item procured under the Tools and ODCs CLINs, print reports/forms, and to receive and transfer digital files with Government systems in conjunction with the required Task Areas. The contractor shall also provide support for the purchasing when required and management of software, equipment, cloud services, and material, to include market research, recommendations, maintaining a list of required items, monitoring and tracking, maintaining accurate inventory records using the Government's tracking system, and purchasing.

C.5.1.1 SUBTASK 1 – ACCOUNTING FOR CONTRACTOR MANPOWER REPORTING

The contractor shall report contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for the SCMS 4.11.4 via a secure data collection site. Contracted services excluded from reporting are based on Product Service Codes (PSCs). The excluded PSCs are:

1. W, Lease/Rental of Equipment
2. X, Lease/Rental of Facilities
3. Y, Construction of Structures and Facilities
4. D, Automatic Data Processing and Telecommunications, IT and Telecom - Telecommunications Transmission (D304) and Internet (D322) ONLY
5. S, Utilities ONLY
6. V, Freight and Shipping ONLY

The contractor is required to completely fill in all required data fields using the following web address "https://doncmra.nmci.navy.mil".

Reporting inputs shall be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk, linked at "https://doncmra.nmci.navy.mil".

C.5.1.2 SUBTASK 2 – COORDINATE A TASK ORDER KICK-OFF MEETING

The contractor shall schedule, coordinate, and host a Kick-Off Meeting **(Section F.3, Deliverable 01**) at a location approved by the Government. The meeting will provide an introduction between the contractor personnel and Government personnel who will be involved with the TO. The meeting will provide the opportunity to discuss technical, management, and security issues, and travel authorization and reporting procedures. At a minimum, the attendees shall include Key contractor Personnel, representatives from SCMS, and the Federal Systems Integration Center (FEDSIM) Contracting Officer's Representative (COR).

At least three days prior to the Kick-Off Meeting, the contractor shall provide a Kick-Off Meeting Agenda (**(Section F.3, Deliverable 02)** for review and approval by the FEDSIM COR and the TPOC prior to finalizing. The agenda shall include, at a minimum, the following topics/deliverables:

a. Points of contact (POCs) for all parties
b. Draft Project Management Plan (PMP) (**Section 5.1.6**) and discussion including schedule, tasks, etc.
c. Personnel discussion (i.e., roles and responsibilities and lines of communication between the contractor and the Government)
d. Staffing Plan and status
e. Transition-In Plan (**Section 5.2**) and discussion
f. Security discussion and requirements (i.e., building access, badges, Common Access Cards (CACs), Secret clearance as appropriate)
g. Invoicing considerations
h. Earned Value Management (EVM) Plan (as required)

The Government will provide the contractor with the number of Government participants for the Kick-Off Meeting and the contractor shall provide sufficient copies of the presentation for all present.

The contractor shall draft and provide a Kick-Off Meeting minutes report (**Section F.3, Deliverable 03**) documenting the Kick-Off Meeting discussion and capturing any action items.

C.5.1.3 SUBTASK 3 – PREPARE A MONTHLY STATUS REPORT (MSR)

The contractor shall develop and provide an MSR (format contained in **Attachment G** (**Section F.3, Deliverable 04**). The MSR shall include the following:

a. Activities during the reporting period, by task (include on-going activities, new activities, and activities completed, and progress to date on all above mentioned activities). Each section shall start with a brief description of the task/activity.

b. Problems and corrective actions taken. Also include issues or concerns and proposed resolutions to address them.

c. Personnel gains, losses, and status (security clearance, etc.).

d. Government actions required.

e. Schedule (show major tasks, milestones, and deliverables; planned and actual start and completion dates for each).

f. Summary of trips taken, conferences attended, etc. (attach Trip Reports to the MSR for the reporting period).

g. EVM statistics (when required).

h. Accumulated invoiced cost for each Contract Line Item Number (CLIN) up to the previous month.

i. Projected cost of each CLIN for the current month.

j. Project issues, risks, and mitigations.

k. The contractor shall deliver a Workforce Reporting Attachment via encrypted file to the designated FEDSIM COR and Technical Point of Contact (TPOC). The Workforce Reporting shall include a labor mix report consisting of name, labor categories, total hours charged for the month, and location. The contractor shall also include the number of gains and losses within that month. The deliverable shall be in Microsoft Excel 2010 or later format.

C.5.1.4 SUBTASK 4 - EARNED VALUE MANAGEMENT (EVM)

The contractor shall employ and report on EVM as required in the management of this TO and IAW with each Project. The degree of EVM usage will vary by sponsors and be defined for the contractor by the customer. See **Section 7.9**, Earned Value Management**,** for potential EVM requirements.

C.5.1.5 SUBTASK 5 – CONVENE TECHNICAL MEETINGS

The contractor PM shall convene a monthly Technical Meeting with the TPOC, FEDSIM COR, and other Government stakeholders as requested (**Section F.3, Deliverable 05**). The purpose of this meeting is to ensure all stakeholders are informed of the monthly activities and MSR, to provide opportunities to identify other activities and establish priorities, to coordinate resolution of identified problems or opportunities, and to work on technical issues. The contractor PM shall provide minutes of these meetings, including attendance, issues discussed, decisions made, and action items assigned, to the FEDSIM COR and the SCMS Representative within five workdays following the meeting.

C.5.1.6 SUBTASK 6 – PREPARE A PROJECT MANAGEMENT PLAN (PMP)

The contractor shall document all support requirements in a PMP. The contractor shall provide the Government with a Draft PMP (**Section F.3, Deliverable 06**) on which the Government will make comments. The Final PMP (**Section F.3, Deliverable 07**) shall incorporate the Government's comments.

The PMP shall:

a. Describe the proposed management approach.

b. Contain detailed Standard Operating Procedures (SOPs) for each sponsor and their associated tasks/activities.

c. Include milestones, tasks, and subtasks required in this TO by sponsor.

d. Provide an overall Work Breakdown Structure (WBS) with a minimum of three levels and associated responsibilities and partnerships between Government organizations (as appropriate to the size of the development effort).

e. Describe in detail the contractor's approach to risk management under this TO.

f. Describe in detail the contractor's approach to communications, including processes, procedures, communication approach, and other rules of engagement between the contractor and the Government, to include all sponsors.

g. Include the contractor's Baseline QCP and EVM Plan when required.

C.5.1.7 SUBTASK 7 – UPDATE THE PROJECT MANAGEMENT PLAN (PMP)

The PMP is an evolutionary document that shall be updated annually at a minimum (**Section F.3, Deliverable 08**) but also as major events occur, e.g. the implementation of new sponsors. The contractor shall work from the latest Government-approved version of the PMP.

C.5.1.8 SUBTASK 8 – PREPARE TRIP REPORTS

The contractor shall provide a Trip Report (**Section F.3, Deliverable 09**) for each trip approved by the Government. The contractor shall keep a summary of all long-distance travel including, but not limited to, the name of the employee, location of travel, duration of trip, and POC at travel location. Trip reports shall also contain Government approval authority, total cost of the trip, a detailed description of the purpose of the trip, and any knowledge gained.

C.5.1.9 SUBTASK 9 – UPDATE BASELINE QUALITY CONTROL PLAN (QCP)

The contractor shall provide a final baseline QCP as required in (**Section F.3, Deliverable 10**). The contractor shall periodically update the QCP (**Section F.3, Deliverable 11**) as changes in program processes are identified.

Within the QCP, the contractor shall identify its approach for providing quality control in meeting the requirements of the TO. The contractor's QCP shall describe its quality control methodology for accomplishing TO performance expectations and objectives. The contractor shall fully discuss its validated processes and procedures that provide high quality performance for each Task Area. The QCP shall describe how the processes integrate with the Government's requirements.

C.5.1.10 SUBTASK 10 - FINANCIAL REPORTING

The contractor shall provide bi-weekly financial reporting In Accordance With (IAW) with **Attachments Q, R, and S** of the Task Order.

C.5.2 TASK 2 - TRANSITION-IN

The contractor shall update the draft Transition-in Plan provided with its proposal and provide a final Transition-in Plan (**Section F.3, Deliverable 12**). The contractor shall ensure that there will be minimum service disruption to vital Government business and no service degradation during and after initial TOA transition and after the transition associated with the implementation of new sponsors. The contractor shall assume responsibility for execution of multiple in-progress engineering efforts by the end of the defined contract transition period. The contractor shall implement its Transition-In Plan no later than No Later Than (NLT) five calendar days after award, and all transition-in activities shall be completed NLT 30 calendar days after TOA (except for the COCO space provided by the contractor within 180 calendar days of TOA).

C.5.3 TASK 3 -TRANSITION-OUT

The contractor shall provide Transition-Out support when required by the Government. The Transition-Out Plan shall facilitate the accomplishment of a seamless transition from the incumbent to an incoming contractor/Government personnel at the expiration of the TO. The contractor shall provide a draft Transition-Out Plan (**Section F.3, Deliverable 13**) within six months of Project Start (PS). The Government will work with the contractor to finalize the Transition-Out Plan IAW the PWS acceptance standards. At a minimum, this Plan shall be reviewed and updated on an annual basis (**Section F.3, Deliverable 14**). Additionally, the Transition-Out Plan shall be reviewed and updated quarterly during the final Option Period (**Section F.3, Deliverable 14**).

In the Transition-Out Plan, the contractor shall identify how it will coordinate with the incoming contractor and/or Government personnel to transfer knowledge regarding the following, by sponsor:

a. Project management processes
b. Points of contact
c. Location of technical and project management documentation
d. Status of ongoing technical initiatives

e. Appropriate contractor to contractor coordination to ensure a seamless transition

f. Transition of Key Personnel

g. Schedules and milestones

h. Actions required of the Government

The contractor shall also establish and maintain effective communication with the incoming contractor/Government personnel for the period of the transition via weekly status meetings or as often as necessary to ensure a seamless transition-out.

The contractor shall implement its Transition-Out Plan NLT 90 calendar days prior to expiration of the TO.

C.5.4 TASK 4 – OPERATIONAL SUPPORT

The contractor shall provide day-to-day sustainment operational support as well support associated with SCMS current projects, and each new project. The projects provide software/hardware/process engineering enhancements and solutions for internal usage and for each sponsor. Operational support shall be provided in St. Inigoes, MD and other CONUS sites. The contractor shall provide Operations Management by way of a disciplined ITIL-based strategy that ultimately complements a DevOps environment and that integrates operations/development engineers and quality assurance through the entire engineering lifecycle, from design, development, and deployment processes to production support.

The Government uses the following inventory systems for its MCDL sponsor. These are recorded in the GFE listing (**Attachment Z**):

a. SCMS Material Inventory Control System (MICS), SCMS Owned, SCMS Maintained
b. BMC Remedy, MCDL owned, contractor maintained

The contractor shall operationally support other SCMS customer systems as they come on line. The contractor shall support the following operational support activities.

C.5.4.1 CONFIGURATION MANAGEMENT SUPPORT

The contractor shall develop, maintain, and execute a Configuration Management Plan (CMP) (**Section F.3, Deliverable 15**) for tracking, maintaining, validating, and auditing the configuration of all system components. This includes all Security, HD, Infrastructure, System, Database systems and subsystems. The contractor shall develop and implement other CMPs (**Section F.3, Deliverable 15**) based on customer requirements. The contractor shall provide the following Configuration Management support:

a. **Auditing:** The contractor shall conduct audits to ensure adherence to the CMP after changes to the baselines of the system components.

b. **Inventory Management:** The contractor shall maintain a complete a list of all system

assets in a Government-identified asset management system. The contractor shall provide inventory status reports periodically or at the customer's request.

C.5.4.2 SECURITY SUPPORT

The contractor shall provide a full spectrum of operational security support and maintain a defense in depth cybersecurity posture as well as provide Information Assurance (IA) status reporting IAW applicable laws and agency policies and directives. The Government currently has available an Information Security Plan (ISP), a Cyber Security Plan (CSP), and a full range of Security Standard Operating Procedures (SOPs). All contractor personnel who access cyber security systems and/or information shall possess an active Secret clearance. The contractor shall provide the following support.

a. **Access Control:** The contractor shall provide the following types of access control support.

    1. Process access requests
    2. Plan and manage user accounts/domain groups/ accounts/Alt Tokens and other accounts used to access key system components
    3. Conduct periodic reviews of access lists and revoke access for individuals who no longer need it

b. **Cryptography:** The contractor shall maintain awareness of the DoD and Industry standards and technologies used for cryptography. The Government may require white papers to document the contractor's research. The contractor shall also maintain certificates and infrastructure used to secure system data.

c. **Cybersecurity Policy / Procedures / Reporting:** The contractor shall develop and maintain Security Programs (**Section F.3, Deliverable 16**) that monitor, review, and report on all related policies and procedures as defined by applicable laws and the Agency's policies and directives.

d. **Incident Handling and Notification:** The contractor shall respond as required to security incidents, IAW with security SOPs. The contractor shall prepare internal and external documentation IAW Government directed policies and notify the appropriate Agencies.

e. **Surveillance:** In accordance with the Security SOPs, the contractor shall monitor physical access to the Government in-house lab, systems, applications and logs to identify potential unauthorized access attempts, and provide the required response and reporting.

f. **Vulnerability Assessment:** Quarterly, or as requested, the contractor shall conduct comprehensive audits of complete security boundaries including all network and computer-related assets, policies and processes. Utilizing both automated tools and

manual methods, that contractor shall scan, using Government-supplied tools, external and internal systems to identify vulnerabilities that might allow an adversary to gain access to privileged data or system functions.

g. **Vulnerability Management:** The contractor shall conduct Vulnerability Scans/Audits to maintain the security posture of the system. The contractor shall review, analyze, and develop Vulnerability Mitigation Strategies (**Section F.3, Deliverable 17**) for all Information Assurance Vulnerability Alerts (IAVA), Information Assurance Vulnerability Bulletins (IAVB), and Operational Directives (OPDirs) and report on compliance through required channels. The contractor shall implement all vulnerability corrections.

C.5.4.3 HELP DESK (HD) SUPPORT

The contractor shall provide 3-tiered HD support at an enterprise level. The contractor shall develop, maintain, and execute a technical support service catalog for each sponsor implementation based on ITIL best practices. The contractor shall develop and maintain HD SOPs as required to support new projects and sponsors. For HD support that is required remotely, the contractor shall provide this by e-mail and phone contact. The contractor shall provide the following support.

a. **Process Management:** The contractor shall develop and maintain ITIL-based Service Catalogs (**Section F.3, Deliverable 18**) for Tier 1 and Tier 2 technical support. The contractor shall decompose identified services into SOPs and Work Instructions. The contractor shall maintain a comprehensive training program for on-boarding and certifying new HD Agents.

b. **Call Center:** The contractor shall receive and respond to user initiated telephone calls within Government-specified SOPs. The contractor shall escalate issues as required to the next level of support IAW the defined SOPs.

c. **Incident Management:** The contractor shall receive and respond to user initiated e-mail and online support requests. The contractor shall escalate issues as required to the next level of support IAW defined SOPs.

d. **Problem Management:** The contractor shall conduct analysis to identify, prevent, eliminate, and minimize the impact of recurring incidents. The contractor shall provide a root cause analysis as appropriate and as required by the Government.

e. **Knowledge Management (KM):** The contractor shall manage and share information obtained through troubleshooting or from outside sources in an efficient manner that would improve the transfer of knowledge between all agents and speed resolution of identified issues.

f. **Troubleshooting and Trend Analysis:** The contractor shall assist users with diagnosing

and resolving issues. The contractor shall conduct analysis of system issues and report trends to the Government.

g. **Reporting:** The contractor shall prepare reports that provide statistics on calls and support requests.

h. **Tier 3 Support:** The contractor shall respond to ECRs as required by providing subject matter expertise in network, database, and security software engineering. The provision of Tier 3 support shall not impact Tiers 1 and 2 support.

C.5.4.4 INFRASTRUCTURE SUPPORT

The contractor shall ensure the stability of the System Infrastructure (see **Attachment Z** for a listing of the MCDL's operational infrastructure) IAW the Government-required SOPs. The contractor shall provide the following Infrastructure Support.

a. **Facilities Monitoring:** The contractor shall monitor the environment, power, and space within the Webster Field operations and production environment, and notify the Government if conditions impact system operations.

b. **Infrastructure Monitoring:** The contractor shall monitor infrastructure components to ensure system stability and performance are maintained and any issues with system components are reported and rectified.

c. **Sparing and Repair:** The contractor shall develop a Sparing Plan (**Section F.3, Deliverable 19**) that meets the Government identified turnaround time for repair / replacement as identified in the SOPs. The contractor shall procure consumables to support sparing / repairs IAW **Section 7.4** of the FON. The contractor shall execute repair / replacement with either procured or Government-provided spares. The contractor shall track sparing use and recommend replenishment such that Government-required SOPs are continually met. The contractor shall execute the warranty repair agreements on the component as required. All spares are housed at the Government's site.

C.5.4.5 SYSTEM SUPPORT

The contractor shall provide on-site support for network operations, systems maintenance, anti-virus management, back-ups, patch management and training support for Distance Learning systems, to include LMS and KMS. The contractor shall develop and maintain a System Maintenance Plan (**Section F.3, Deliverable 20**). The contractor shall follow the Government-approved Systems Maintenance Plan in accomplishing the following.

a. **Network Operations:** The contractor shall develop and execute a plan for appropriate regular maintenance for networks and network appliances supporting LMSs or KMSs. The contractor shall monitor and report network performance.

b. **Systems Maintenance:** The contractor shall develop and execute a plan for appropriate regular maintenance for both hosts and servers supporting LMSs or KMSs. The contractor shall monitor and report system performance.

c. **Anti-Virus Management:** The contractor shall maintain anti-virus software on all systems. The contractor shall ensure that engines and definitions are up to date and that scans are executed IAW with the SOPs.

d. **Host-Based Security Management:** The contractor shall maintain the Host Based Security systems. The contractor shall ensure that engines and policies are up to date IAW the SOPs.

e. **Back-ups:** The contractor shall execute and maintain incremental and full backups of data and configuration of all systems IAW with the SOPs. The contractor shall coordinate shipment of backup tapes to the Government-designated backup location. The contractor shall perform tests of backup restoration IAW with the Government defined schedule. The contractor shall restore backed up information IAW the SOPs.

f. **Patch Management:** The contractor shall develop, maintain, and execute a Patch Management Plan. The contractor shall maintain the patches on all hardware / software systems IAW the Patch Management Plan. The contractor shall coordinate with on-site staff and third-party contractors to conduct patching of remote systems.

g. **Reporting:** The contractor shall conduct periodic and ad-hoc performance and volume reporting for all components of the systems. The contractor shall report Government-specified information with current Government-provided dashboards. The Government currently uses a mix of Commercial-Off-The-Shelf (COTS) products to show Key Performance Parameters (KPPs), service level objectives, and application performance. The contractor shall modify the reported information to show progress toward meeting AQLs. The current display system is comprised of a combination of Solar Winds, Structure Query Language (SQL) Server Reporting Service (SSRS), custom reports, Custom Communications Management (CCM), and Application Performance Monitor (AMP). The contractor shall monitor system resources; establish performance recommendations, identify thresholds for reporting; and conduct reporting based on defined thresholds.

C.5.4.6 DATABASE ADMINISTRATION SUPPORT

The contractor shall conduct database administration to include custom/canned reporting, data synchronization, log review management, performance monitoring, and database health optimization. The MCDL implementation requires support on a Structured Query Language (SQL)-based database. The contractor shall also provide support in Oracle and with unstructured data as well as other support systems depending on the sponsor. The contractor shall provide the following support.

a. **Ad-hoc/Custom/Canned Reporting:** The contractor shall develop, test and deliver Government-required reports. The contractor shall analyze and correlate complex data from disparate sources using SQL and MySQL search capabilities.

b. **Data Visualization:** The contractor shall develop live data dashboards, charts, infographics and animated data to articulate complex data for sponsors (**Section F.3, Deliverable 21**).

c. **Data Synchronization:** The contractor shall provide daily maintenance of connections to internal/external system interfaces. The contractor shall produce, process, and validate that the data is consistent and synchronized between origin and destination.

d. **Log Review and Management:** The contractor shall manage logs of all database activities. The contract shall review, assess, and report/ act upon logged information of database health and events such that overall process reporting meets or exceeds the performance measures.

e. **Performance/Health Monitoring and Optimization:** The contractor shall conduct continuous review of database system architectures to ensure health and optimize performance. The contractor shall review and optimize performance of triggers, stored procedures, and functions.

f. **Data Science:** In order to support business decisions and HD and development optimization, the contractor shall collect and analyze data from multiple systems and external sources. The contractor shall provide insights to the Government on ways to optimize system performance.

C.5.4.7 MAINTAINING CONTENT AVAILABILITY

The contractor shall continually monitor functionality and availability of deployed content to ensure accurate and continual content availability to the users IAW the SOPs. The contractor shall provide the following support:

a. **Content Management:** The contractor shall develop and maintain a Content Management Plan (**Section F.3, Deliverable 22**) and execute the Plan to ensure its availability where and when required. The contractor shall execute version control on all managed content to ensure that the latest version is provided to sponsors.

b. **Monitoring and troubleshooting:** The contractor shall monitor content availability and functionality. The contractor shall troubleshoot identified issues, and resolve or escalate/report them IAW the Content Management Plan.

c. **User Access:** The contractor shall ensure users are able to access content when required and IAW the Content Management Plan.

C.5.4.8 COURSEWARE/CONTENT TESTING

The contractor shall test externally developed Content and Courseware to ensure it functions within the production environment. The contractor shall provide the following support:

a. **Courseware/Content Testing:** The contractor shall develop and maintain a Courseware/Content Testing Plan (**Section F.3, Deliverable 23**). In accordance with the Government-approved Course/Content Management Plan the contractor shall maintain a visible list of courses/content that are being tested at a location determined by the customer. The contractor shall execute the tests and report results IAW the Courseware/Content Testing Plan.

b. **Queue Management:** The contractor shall maintain a prioritized list of courses/content to be validated and execute testing IAW the Government-approved list and in a timely manner.

c. **Technical Review:** The contractor shall conduct technical review of courses/content and identify and provide recommendations for solving issues.

C.5.4.9 SOFTWARE SUPPORT ACTIVITIES

The contractor shall develop a COTS Product Management Plan and conduct software support activities IAW the Government-approved plan. Contractor-performed activities include evaluating/testing plugins, troubleshooting production courseware/content issues, and executing maintenance actions.

a. **COTS Product Updates:** The contractor shall develop, maintain, and execute a COTS Product Management Plan. The contractor shall execute COTS product updates as they become available.

b. **Plugin Testing and Evaluation:** The contractor shall continually monitor the availability of updates to plugins for the system baseline and correspondingly develop test plans for updates to the plugins, execute the tests, and report the results.

c. **Courseware/Content Maintenance:** The contractor shall conduct troubleshooting of production courseware/content issues and identify potential resolutions and report to the appropriate organization for action. The contractor shall execute maintenance actions, conduct troubleshooting of system issues, identify potential resolutions, and execute maintenance actions.

d. **Software Enhancements:** The contractor shall identify potential issues that would require software enhancements and/or upgrades. After Government approval the contractor shall develop and install the Software Enhancement Updates (**Section F.3, Deliverable 24**).

e. **Cloud Access:** Ensure application access to the cloud as required by the sponsor.

C.5.5 TASK 5 - ENGINEERING SUPPORT

The contractor shall design, develop, integrate, test, and provide overall technical support for the system upgrades or for newly developed Distance Learning systems (**Section F.3, Deliverables 25**) and programs to include LMS and KMS to support the overall Distance Learning capability. The contractor shall provide necessary DoD acquisition process documentation to support the development of new systems or the upgrade and/or replacement of existing systems to meet mission and operational requirements. The contractor shall provide results of surveys, interviews, analysis, and associated technical data. The contractor shall synchronize its approach to systems engineering to be complementary to SCMS' documented systems engineering technical and management processes. Engineering activities up to and including coding and unit testing shall be performed in the contractor's development environment. The remaining engineering support is done with contractor assistance in the Government's staging and production environments. This may change over time as the Government moves to a DevOps paradigm and to cloud hosting. The contractor shall provide the following engineering support.

C.5.5.1 SYSTEMS ENGINEERING

The contractor shall develop a Systems Engineering Management Plan (**Section F.3, Deliverable 26**) and perform systems engineering IAW the Government-accepted plan. The contractor shall provide the following support:

a. **Requirements Definition:** The contractor shall develop documentation covering operational, functional, testing, and logistics requirements for Distance Learning systems (**Section F.3, Deliverable 27**). The contractor shall conduct surveys, interviews, and process analysis at specified sites to determine and document existing baselines of Distance Learning systems and their adequacy to support current and future mission and operational requirements. The contractor shall develop a Requirements Traceability Matrix (**Section F.3, Deliverable 28**) for requirements.

b. **Solution Definition:** The contractor shall conduct Technical Feasibility Studies (**Section F.3, Deliverable 29**) for identified Distance Learning requirements; to include, developing and documenting system designs and creating drawing packages, Master Equipment Lists (MELs), Test Plans and Security Plans.

c. **Integration:** The contractor shall maintain inventory control of all systems and sub-systems and develop detailed System Integration SOPs and Work Instructions (**Section F.3, Deliverable 30**). The contractor shall identify security controls and conduct integration/assembly/hardening of Distance Learning systems. The contractor shall also develop and validate test procedures, test data, and conduct unit tests.

d. **Verification:** The contractor shall assist with Operational and User Acceptance tests. The contractor shall create Operational and User Test reports (**Section F.3, Deliverable 31**)

for Government review and acceptance.

1. The contractor shall develop test plans, for Government review and acceptance that would at a minimum, be composed of sequential and increasingly sophisticated steps to ensure that test needs, limitations, resources, and all engineering aspects of the test are considered.

2. The contractor shall assist the Government with acceptance testing to ensure that the installed system meets all functional, operational, and performance characteristics within the specification, and that it adheres to all identified standards. The contractor shall provide documentation to verify that the acceptance test plan provides complete coverage of all documented system requirements.

3. The contractor shall provide independent and objective evaluation of test plans, procedures, results and data. The contractor shall identify and track deficiencies to closure and recommend corrective measures. The contractor shall take corrective action to resolve problems identified by the Government.

4. The contractor shall plan for and conduct performance and integration testing of Distance Learning systems to identify defects and potential system limitations.

5. The contractor shall document test results and identify problems and issues associated with the system. The contractor shall develop and provide Test Result Reports, Requirement Traceability Matrices, and other required testing documentation IAW System Plans.

e. **Production/Sustainment:** The contractor shall provide Integrated Logistics Support (ILS) services for new and modified systems and subsystems and conduct user training and fielding activities. The contractor shall maintain/validate system configurations and respond to Process Engineering Change Proposals for correcting defects and improving Distance Learning systems. In support of production/sustainment the contractor shall perform the following:

1. The contractor shall develop or review ILS Strategies (**Section F.3, Deliverable 32**) for supporting Distance Learning systems requirements, documentation and schedules considering geographic area of deployment, equipment requirements, supportability, equipment/system interoperability, equipment/material availability, procurement lead-times, and inventory and stocking requirements.

2. The contractor shall review support preparedness and readiness data for Distance Learning systems, identify deficit areas and develop Contingency Plans (**Section F.3, Deliverable 33**) to resolve deficiencies. The contractor shall identify the impact of proposed changes.

3. The contractor shall provide ILS planning and analysis for new or modified Distance

Learning systems/equipment.

4. The contractor shall develop, review, analyze, and/or update services maintenance and repair concepts and plans, reliability plans and reports, operations and maintenance manuals, training manuals, instructor guides, trainee guides and classroom presentation material. The contractor shall provide recommendations for improvement.

5. The contractor shall review and update logistics documentation to reflect changes and revisions in the Distance Learning systems.

6. The contractor shall develop and maintain provisioning parts lists for spare and repair parts, support and test equipment, and support long lead items.

7. The contractor shall identify Measures of Effectiveness and Performance (MOE/MOP) and document the performance of ILS activities in meeting readiness goals and objectives.

8. The contractor shall conduct analysis of alternative studies to support predictions of system performance and operational impacts of various design alternatives.

9. The contractor shall support, maintain, and utilize the Government's automated system for tracking maintenance actions to enable ILS activities.

f. **Risk Management:** The contractor shall conduct technical risk management by identifying, documenting, and developing mitigation strategies for risks throughout the entire systems engineering process.

g. **Configuration Documentation:** The contractor shall document the configuration of a system at distinct points in time for the purpose of systematically managing changes. The contractor shall maintain the integrity and traceability of the configuration throughout the system's life cycle.

h. **Schedule Management:** The contractor shall develop and document Strategic Plans (**Section F.3, Deliverable 34**) for the implementation of Distance Learning systems, equipment and subsystems with distinctly defined near, mid, and long-term initiatives. The contractor shall maintain a list of a project's milestones with intended start and finish dates to include a work breakdown structure, an estimate of effort for each task, and a resource list with the availability for each resource. The contractor shall track deviations from the original schedules and develop and document transition plans for the reengineering, replacement, and/or phase out of legacy systems with new and state-of-the art systems.

i. **Technical Reviews:** The contractor shall provide technical support at designated Systems Engineering Technical Reviews (SETR) with senior technical and programmatic Subject

Matter Experts (SMEs)/Technical Area Experts to evaluate overall development, design maturity and associated risk as described in NAVAIR Instructions (NAVAIRINST) 4355.19E. The contractor shall attend technical meetings and program reviews with Government personnel and provide briefing materials, technical data and illustrations, engineering drawings, and minutes in support of these meetings.

C.5.5.2 CYBERSECURITY ENGINEERING

All personnel performing cyber security activities or accessing cybersecurity technology shall have a Secret clearance. The contractor shall provide the following support:

a. **Process Development:** The contractor shall support operations by developing documentation and SOPs IAW applicable law and agency policy to maintain compliance for a complete defense in depth cybersecurity posture for Distance Learning systems.

b. **Certification and Accreditation (C&A):** The contractor shall develop and document security requirements, plans, procedures and architectures. The contractor shall analyze-in-place and proposed systems' security postures and document and report results. The contractor shall identify and develop required cybersecurity artifacts to support C&A activities for both existing and proposed systems and work with the appropriate sponsor Designated Approving Authorities (DAA) to engineer IA compliance into the Distance Learning systems.

C.5.5.3 FACILITIES ENGINEERING

The contractor shall provide design support for the internal design and upgrade of space organization to accommodate items such as infrastructure and training capabilities. The facilities are used primarily to house Distance Learning systems and subsystems. These facilities may include Sensitive Compartmented Information Facilities (SCIF). The contractor shall provide the following facilities engineering support.

a. **Analysis:** The contractor shall document or review existing facility requirements. The contractor shall evaluate the facility and its supporting structures' capability to meet operational and organizational requirements. The contractor shall conduct surveys at potential installation sites to determine and document architectural designs and conceptual architectural alternatives, design options, and operational assessments.

b. **Site Surveys:** The contractor shall conduct or review facility site surveys. The contractor shall identify facility layouts, space considerations, cable plant layout, and structural considerations. The contractor shall also identify and review surveys in terms of available power as well as physical, environmental, and security constraints. The contractor shall identify the organization's POCs for supporting the facility design, upgrade, operations, and maintenance.

c. **Design:** The contractor shall develop all required project facility supporting

documentation including architectural plans, regulatory studies, and construction drawings (**Section F.3, Deliverable 35**).

d. **Planning:** The contractor shall develop and document an implementation plan including a Plan of Action and Milestones (POA&M) for the facility modernization/upgrade (**Section F.3, Deliverable 36**).

C.5.5.4 SOFTWARE ENGINEERING

The contractor shall provide Software Engineering, for existing and new sponsors, by way of a disciplined DevOps based paradigm, integrating development/operations engineers and quality assurance throughout in the entire engineering lifecycle, from design, development and deployment processes to production support. The contractor shall provide services to define, code, debug and test software. The contractor shall perform development and automated unit/regression testing at its COCO development site. Once unit testing is complete the contractor shall pass the software to the Government to assist with two stage testing. The Government uses primarily spiral development; however, the Government is moving to Agile development. The contractor shall develop Systems/Software (**Section F.3, Deliverable 37**) using any one of spiral, waterfall, or Agile development methodologies depending on the sponsor.

As required, the contractor shall follow the guidance and mandatory elements of the current Software Process Improvement Initiative (SPII).

a. **Software Development Plan:** The contractor shall document and execute a Software Development Plan (SDP) for software engineering activities according to an industry standard paradigm selected by the Government. Included within this SDP shall be interim program development reviews at each milestone, documentation of the proposed programming languages, the development environment and tools, and project-level software development processes. The contractor shall tailor the process to meet time/cost constraints and minimally support all of the following software engineering paradigms: Lean, Agile, Waterfall, Spiral, and Iterative.

b. **Requirements Analysis:** The contractor shall identify and define the functional and performance requirements for each software component and document how the identified requirements satisfy the specific mission, goals, and objectives. The contractor shall conduct interviews with sponsors to collect and document requirements. Sponsors are primarily located in Quantico and Orlando, Florida. These are primarily functional requirements sponsors, end users, and personnel in program offices. The contractor shall analyze and refine sponsor-identified requirements. The contractor shall demonstrate understanding through the use of wireframes, use cases, and other artifacts. The contractor shall present findings to sponsors for validation.

c. **Design:** The contractor shall document the software system specification and design which shall include a detailed functional summary for each module, including all data

inputs, screen formats for each input function, input data sources, processing requirements, interface requirements, data flow, and proposed programming languages. It shall include a description of the function and purpose of each module, accuracy and validity requirements, timing, flexibility, interfacing requirements and constraints, security requirements and output destination(s) and formats. The contractor shall document the database specification which shall include a design description of the organization of the database structure, field tables, storage requirements, and record linkages.

d. **Coding:** The contractor shall develop, code, primarily in C++, C#.net, Javascript, SQL, Extensible Markup Language (XML), and PHP, and debug the required units, modules, and programs and create the database systems IAW the specifications. Models, simulation, and/or test tools shall be designed and used as appropriate for reliable code assessment and validation. The contractor shall incorporate state of the art tools and technologies in system solutions including Service Oriented Architectures (including web services), open source technologies, Portal Technologies, Reporting Services, XML, and Computer-aided Design (CAD), to ensure a stable and supportable application over the system life cycle. The contractor shall provide in-line commenting to support detailed code reviews with the Government as necessary.

e. **Testing:** The contractor shall utilize automated tools and manual verification to conduct unit, functional, and integration testing of the required software units, modules and systems. The contractor shall document test results and report defects and defect rates. The contractor shall utilize defect reports to develop and socialize lessons learned and continually improve the quality of software developed. The contractor shall execute both targeted tests and complete regression tests as required by the Government.

f. **Deployment:** The contractor shall demonstrate functional code to stakeholders. The contractor shall deploy code to various test and production environments. The contractor shall conduct installation, customization, testing, and a period of evaluation once the software systems code is appropriately tested and approved for release. The contractor shall deliver all documentation, development resources, source code, test results, and compiled executables to the Government.

g. **Training:** The contractor shall provide subject matter expertise for the development of training materials for users and administrators for code developed.

C.5.5.5 NETWORK ENGINEERING

The contractor shall conduct network architecture development and analysis in support of new Distance Learning systems and updates to existing Distance Learning systems. The contractor shall diagnose and resolve complex network issues and support the entire engineering lifecycle and system accreditation process. The Government is preparing to migrate MarineNet 6.0 to the cloud and is currently performing technical refreshes.

a. **Architecture Analysis and Development:** The contractor shall conduct analysis of current architecture models and compare these to new models, technologies, industry standards, and security measures. The contractor shall conduct analysis to ensure new architecture models support expected performance and functionality for Distance Learning systems. The contractor shall develop new Architecture Designs (**Section F.3, Deliverable 38**).

b. **Complex Network Issue Resolution:** The contractor shall evaluate, troubleshoot, and develop a roadmap for resolution of complex networking issues. The contractor shall work with internal program staff and external agencies to evaluate issues, coordinate testing, and validate resolutions. The contractor shall also develop resolutions to complex network issues.

C.5.5.6 ITIL PROCESS ENGINEERING

The contractor shall conduct ITIL-based assessments of each sponsor organization as requested. The contractor shall document and assess the as-is state of the organization and its processes and identify gaps in documentation. The contractor shall identify opportunities to improve or streamline processes. The contractor shall deploy technology to automate processes where possible and provide the following support:

a. **Capture:** The contractor shall conduct a thorough ITIL based assessment of an organization, identify and interview all stakeholders and gather their roles and responsibilities. The contractor shall identify, document, and deliver all existing processes.

b. **Analysis:** The contractor shall identify processes to be standardized and re-engineered and identify gaps or missing processes critical to the organization's success. The contractor shall work with stakeholders to document any missing processes and identify and propose opportunities to improve or streamline processes.

c. **Automation:** The contractor shall deploy various COTS/Government Off-the-shelf (GOTS)/Custom systems, tools and techniques to automate processes.

C.5.5.7 KNOWLEDGE MANAGEMENT (KM)

The contractor shall develop a comprehensive a KM Strategy (**Section F.3, Deliverable 39**) to support the organization's knowledge dominance and facilitate decision superiority. The contractor shall ensure standardized implementation and effective and efficient development and maturation of knowledge sharing processes in a collaborative environment for each user. Based on the sponsor's particular requirements, the contractor shall move from this phase to KM development, implementation, and then into operational sustainment.

a. **Knowledge Capture:** The contractor shall develop automated and manual strategies and techniques to capture individual and organizational knowledge.

b. **Knowledge Analysis:** The contractor shall conduct analysis of an organization's knowledge and develop strategies to organize, sort, categorize and conceptualize knowledge as well as identify gaps in an organization's knowledge.

c. **Knowledge Sharing:** The contractor shall develop knowledge sharing strategies and techniques for an organization and deploy various COTS/GOTS/Custom systems, tools and techniques to facilitate knowledge sharing and transfer such as knowledge repositories, expert systems, decision support systems, portals, content management systems, and document management systems.

d. **KM Change Management Plan:** The contractor shall develop and execute a plan to manage changes to captured knowledge.

C.5.5.8 TRAINING DEVELOPMENT

The contractor shall work with clients, SME, and Instructional Designers (ID) to produce various types of distance education and training content. The Government estimates requiring the development of four, one-hour courses the first year of the TO and nine 1-hour courses for each of the optional years. The courses shall be provided at Interactive Multimedia Instruction (IMI) Level 3.

a. **Planning:** The contractor shall prepare and update training plans, course materials, performance aids and materials for required system training. This includes COTS applications and Distance Learning system unique training. The contractor shall define course curriculum, and develop Course Material and References (**Section F.3, Deliverable 40**).

b. **Instructor Led:** The contractor shall provide instructor-led training for new or upgraded Distance Learning systems or sub-systems.

c. **IMI Course:** The contractor shall produce high quality IMI courseware according to the xAPI/Shareable Content Reference Model (SCORM) standards.

d. **Audio/Video:** The contractor shall produce professional training and education audio/videos and provide pre-production, production and post production and deployment support including producers, screen-writers, directors, cameramen, sound engineers, graphic artists, editors and associated equipment/software.

    1. **Pre-Production:** The contractor shall coordinate with the client, SMEs and IDs to develop a concept and set of learning objectives for the audio/video. The contractor shall develop an outline, script and storyboard for the audio/video and validate accuracy with the client and SMEs. The contractor shall identify all production assets and develop a production schedule.

    2. **Production:** The contractor shall create production assets such as video, graphics,

animations, video effects, audio, music, and sound effects.

3. **Post Production:** The contractor shall combine production assets and edit audio/video productions and provide previews to the sponsor, SMEs and IDs for approval or additional editing.

4. **Deployment:** The contractor shall deliver all production assets and final versions in the Government identified format appropriate for Distance Learning systems.

Training content development would normally fall into three categories, course development, content development, and training vignettes. Examples are below:

e. **Course Development:** The contractor shall develop level 1-3 IMI training that is compliant with the applicable standards (example: SCORM 2004, xAPI). The contractor shall collaborate with sponsor-provided SMEs and document course learning objectives, content, structure, and evaluation criteria. The contractor shall produce appropriate audio, video, and interactive content and conduct the Software Engineering activities to develop a course.

f. **Curriculum Development:** The contractor shall develop a series of computer-based training courses (**Section F.3, Deliverable 41**) compliant with the xAPI standards. The contractor shall collaborate with the sponsor-provided SMEs and document course learning objectives, content, structure, and evaluation criteria. The contractor shall produce appropriate audio, video, interactive content and conduct the Software Engineering activities to develop each course.

g. **Training Vignette:** The contractor shall collaborate with sponsor SMEs and develop a short video vignette to demonstrate a skill. The contractor shall document learning objectives, develop story boards and collaborate with SME Actors and then produce and edit the video.

C.5.5.9 EMERGING TECHNOLOGY

The contractor shall provide engineering support to perform research on and experiment with emerging technologies for Distance Learning in order to identify current system trends, and conduct performance analysis coupled with database, software, and network architecture exploration to augment current capabilities and ensure future functionality. The emphasis shall be placed on emerging technologies directly and indirectly related to DL systems and subsystems. The contractor shall test scenarios and hardware/software on the Government's test system.

a. **Technology Analysis:** The contractor shall conduct product and technology analysis to identify, review and compare new and emerging technologies as suitable solutions for incorporation into Distance Learning architectures, hardware and software. The contractor shall conduct market studies to assess the readiness of the technology and risk

factors including technical maturity and/or available products, financial stability of potential vendors and the effects of inserting emerging technologies into Distance Learning projects.

b. **System Analysis:** The contractor shall evaluate new and emerging technologies for suitability by conducting analysis of current system and user activities and existing network/database/software architectures.

c. **Design:** The contractor shall design system architectures to integrate new and emerging technologies into new or existing Distance Learning systems and use modeling and simulation and prototyping to support and validate design decisions.

d. **Technical Reviews:** The contractor shall attend project reviews, technical reviews and technical meetings to research or discuss new and emerging technologies

C.5.6 TASK 6 – ADDITIONAL AS-NEEDED SUPPORT

In support of the current sponsor, i.e. MCDL and new sponsors, operational and engineering enhancements, similar to the requirements of Task Areas 4 and 5 above, will be required that were not anticipated at the time of TOA. The contractor shall support these requirements as they occur without loss of sustainment performance. In addition, the Government intends to make various architectural modifications and additions over the life of the Task Order. Examples are moving to the cloud with a blue/green testing/development environment within the first 18 months of the TO and performing Technical Refreshes for sponsor environments.